

CLAIM AMENDMENTS

Claim Amendment Summary

Claims pending

- At time of the Action: Claims 1-33.
- After this Response: Claims 1-33 and 47-55.

Canceled or Withdrawn claims: none.

Amended claims: 1, 9, 18-22, and 28.

New claims: 47-55.

Claims:

1. (CURRENTLY AMENDED) A method for concealing an information pattern of multiple discrete values within a digital signal, the method comprising:

receiving the information pattern of multiple discrete values;

chessboarding the discrete values of the information pattern to produce chessboarded discrete values, wherein chessboarding comprises adjusting one or more discrete values of the information pattern.

2. (ORIGINAL) A method as recited in claim 1 further comprising encoding the chessboarded discrete values into the digital signal, wherein such signal is noise in relation to the information pattern.

1 3. **(ORIGINAL)** A method as recited in claim 1, wherein the
2 chessboarding comprises:

3 pseudorandomly determining whether to change each discrete value
4 of the information pattern, wherein such determining is based upon a
5 pseudorandom number generator (PRNG) and a key;

6 changing each discrete value of the information pattern that the
7 determining indicates should be changed, thereby producing chessboarded
8 discrete values.

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10 4. **(ORIGINAL)** A method as recited in claim 1, wherein the
11 chessboarding comprises:

12 pseudorandomly determining whether to change each discrete value
13 of the information pattern, wherein such determining is based upon a look-
14 up table;

15 changing each discrete value of the information pattern that the
16 determining indicates should be changed, thereby producing chessboarded
17 discrete values.

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19 5. **(ORIGINAL)** A method as recited in claim 1, wherein the
20 chessboarded discrete values are entropy-balanced.

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22 6. **(ORIGINAL)** A method as recited in claim 1, wherein the
23 chessboarded discrete values are absolutely chessboarded.
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1 7. (ORIGINAL) A method as recited in claim 1, wherein the
2 digital signal is an digital audio signal.

3
4 8. (ORIGINAL) A computer-readable medium having computer-
5 executable instructions that, when executed by a computer, performs the
6 method as recited in claim 1.

7
8 9. (CURRENTLY AMENDED) A method for revealing an
9 information pattern of multiple chessboarded discrete values within a
10 digital signal, wherein the chessboarded discrete values correspond to
11 original discrete values of the information pattern before the values were
12 chessboarded, the method comprising:

13 receiving the information pattern of multiple chessboarded discrete
14 values;

15 un-chessboarding the chessboarded discrete values to produce the
16 original values of the information pattern, wherein un-chessboarding
17 comprises adjusting one or more discrete values of the information pattern.

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19 10. (ORIGINAL) A method as recited in claim 9 further
20 comprising detecting the original discrete values encoded in the digital
21 signal, wherein such signal is noise in relation to the information pattern.
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11. (ORIGINAL) A method as recited in claim 9, wherein the un-chessboarding comprises:

pseudorandomly determining whether to change each chessboarded discrete value of the information pattern, wherein such determining is based upon a pseudorandom number generator (PRNG) and a key;

changing each chessboarded discrete value of the information pattern that the determining indicates should be changed, thereby producing the original discrete values of the information pattern.

12. (ORIGINAL) A method as recited in claim 11, wherein the key of the un-chessboarding is identical to a key used to generate the chessboarded discrete values from the original discrete values.

13. (ORIGINAL) A method as recited in claim 9, wherein the un-chessboarding comprises:

pseudorandomly determining whether to change each chessboarded discrete value of the information pattern, wherein such determining is based upon a look-up table;

changing each chessboarded discrete value of the information pattern that the determining indicates should be changed, thereby producing the original discrete values of the information pattern.

14. (ORIGINAL) A method as recited in claim 9, wherein the chessboarded discrete values are entropy-balanced.

1 15. (ORIGINAL) A method as recited in claim 9, wherein the
2 chessboarded discrete values are absolutely chessboarded.

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4 16. (ORIGINAL) A method as recited in claim 9, wherein the
5 digital signal is an digital audio signal.

6
7 17. (ORIGINAL) A computer-readable medium having computer-
8 executable instructions that, when executed by a computer, performs the
9 method as recited in claim 9.

10
11 18. (CURRENTLY AMENDED) A computer-readable medium
12 having computer-executable instructions that, when executed by a
13 computer, perform a method for concealing an information pattern of
14 multiple discrete values within a digital signal, the method comprising:

15 receiving the information pattern of multiple discrete values;

16 chessboarding the discrete values of the information pattern to
17 produce chessboarded discrete values, wherein chessboarding comprises
18 adjusting one or more discrete values of the information pattern;

19 encoding the chessboarded discrete values into the digital signal,
20 wherein such signal is noise in relation to the information pattern.

1 19. (CURRENTLY AMENDED) A computer-readable medium
2 having computer-executable instructions that, when executed by a
3 computer, perform a method for revealing an information pattern of
4 multiple chessboarded discrete values within a digital signal, wherein the
5 chessboarded discrete values correspond to original discrete values of the
6 information pattern before the values were chessboarded, the method
7 comprising:

8 receiving the information pattern of multiple chessboarded discrete
9 values;

10 un-chessboarding the chessboarded discrete values to produce the
11 original values of the information pattern, wherein un-chessboarding
12 comprises adjusting one or more discrete values of the information pattern;

13 detecting the original discrete values encoded in the digital signal,
14 wherein such signal is noise in relation to the information pattern.
15

16 20. (CURRENTLY AMENDED) An apparatus comprising:

17 a processor;

18 a chessboarder executable on the processor to:

19 receive an information pattern of multiple discrete values;

20 chessboard the discrete values of the information pattern to
21 produce chessboarded discrete values, wherein one or more of the
22 chessboarded discrete values differs from the discrete values before
23 chessboarding.
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1 21. (CURRENTLY AMENDED) An apparatus comprising:

2 a processor;

3 an un-chessboarder executable on the processor to:

4 receive an information pattern of multiple chessboarded
5 discrete values;

6 un-chessboard the chessboarded discrete values to produce
7 original values of the information pattern, wherein one or more of
8 the un-chessboarded discrete values differs from the chessboarded
9 discrete values before un-chessboarding.

10
11 22. (CURRENTLY AMENDED) An information pattern encoding
12 system for concealing an information pattern of multiple discrete values
13 within a digital signal, wherein such signal is noise in relation to the
14 information pattern, the system comprising:

15 a receiver for receiving the information pattern of multiple discrete
16 values and the digital signal;

17 a chessboarder coupled to such receiver, the chessboarder
18 chessboards the discrete values received from the receiver to produce
19 chessboarded discrete values, wherein one or more of the chessboarded
20 discrete values differs from the discrete values before chessboarding;

21 an encoder coupled to the receiver and the chessboarder, the encoder
22 inserts the chessboarded discrete values received from the chessboarder into
23 the digital signal received from the receiver.

1 23. (ORIGINAL) An encoding system as recited in claim 22,
2 wherein the chessboarder comprises:

3 a pseudorandom number generator (PRNG) for pseudorandomly
4 determining whether to change each discrete value of the information
5 pattern;

6 a value-adjuster to change each discrete value of the information
7 pattern that the PRNG indicates should be changed, thereby producing
8 chessboarded discrete values.

9
10 24. (ORIGINAL) An encoding system as recited in claim 22,
11 wherein the chessboarder comprises:

12 a look-up table data structure for pseudorandomly determining
13 whether to change each discrete value of the information pattern;

14 a value-adjuster to change each discrete value of the information
15 pattern that the data structure indicates should be changed, thereby
16 producing chessboarded discrete values.

17
18 25. (ORIGINAL) An encoding system as recited in claim 22,
19 wherein the chessboarded discrete values are entropy-balanced.

20
21 26. (ORIGINAL) An encoding system as recited in claim 22,
22 wherein the digital signal is a digital audio signal.

1 27. (ORIGINAL) An operating system comprising an encoding
2 system as recited in claim 22.

3
4 28. (CURRENTLY AMENDED) A marked signal with an
5 information pattern of multiple chessboarded discrete values encoded
6 therein, the marked signal generated in accordance with the following acts:

7 receiving an information pattern of multiple discrete values and an
8 unmarked signal;

9 chessboarding the discrete values of the information pattern to
10 produce chessboarded discrete values of the information pattern, wherein
11 one or more of the chessboarded discrete values differs from the discrete
12 values before chessboarding;

13 encoding the chessboarded discrete values into the unmarked signal
14 to produce the marked signal, wherein such unmarked signal is noise in
15 relation to the information pattern.

16
17 29. (ORIGINAL) A marked signal as recited in claim 28, wherein
18 the chessboarding comprises:

19 pseudorandomly determining whether to change each discrete value
20 of the information pattern, wherein such determining is based upon a
21 pseudorandom number generator (PRNG) and a key;

22 changing each discrete value of the information pattern that the
23 determining indicates should be changed, thereby producing chessboarded
24 discrete values.

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1 30. **(ORIGINAL)** A marked signal as recited in claim 28, wherein
2 the chessboarding comprises:

3 pseudorandomly determining whether to change each discrete value
4 of the information pattern, wherein such determining is based upon a look-
5 up table;

6 changing each discrete value of the information pattern that the
7 determining indicates should be changed, thereby producing chessboarded
8 discrete values.

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10 31. **(ORIGINAL)** A marked signal as recited in claim 28, wherein
11 the chessboarded discrete values are entropy-balanced.

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13 32. **(ORIGINAL)** A marked signal as recited in claim 28, wherein
14 the chessboarded discrete values are absolutely chessboarded.

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16 33. **(ORIGINAL)** A marked signal as recited in claim 28, wherein
17 the marked and unmarked signals are digital audio signals.

18
19 **Claims 34-46 are CANCELED.**

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NEW CLAIMS:

47. (NEW) A method for concealing an information pattern of multiple discrete values within a digital signal, the method comprising:
receiving the information pattern of multiple discrete values;
chessboard encoding the discrete values of the information pattern to produce chessboarded discrete values, wherein chessboard encoding comprises adjusting the discrete values in accordance with a defined pattern.

48. (NEW) A method as recited in claim 47, wherein the chessboarded discrete values are absolutely chessboarded.

49. (NEW) A method as recited in claim 47, wherein the digital signal is an digital audio signal.

50. (NEW) One or more computer-readable media having computer-executable instructions that, when executed by a computer, performs the method as recited in claim 47.

1 **51. (NEW)** A method for concealing an information pattern
2 of multiple discrete values within a digital signal, the method comprising:
3 receiving the information pattern of multiple discrete values;
4 generating a pseudorandom pattern based upon a pseudorandom
5 number generator (PRNG) and a key;
6 chessboard encoding the discrete values of the information pattern to
7 produce chessboarded discrete values, wherein chessboard encoding
8 comprises adjusting one or more of the discrete values in accordance with
9 the pseudo-randomly generated pattern.

10
11 **52. (NEW)** A method as recited in claim 51 further
12 comprising encoding the chessboarded discrete values into the digital
13 signal, wherein such signal is noise in relation to the information pattern.

14
15 **53. (NEW)** A method as recited in claim 51, wherein the
16 chessboarded discrete values are entropy-balanced.

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18 **54. (NEW)** A method as recited in claim 51, wherein the
19 digital signal is an digital audio signal.

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21 **55. (NEW)** One or more computer-readable media having
22 computer-executable instructions that, when executed by a computer,
23 performs the method as recited in claim 51.
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